



# West Nile Virus

## California Department of Food and Agriculture

### Animal Health Branch

### Information for Horse Owners

**West Nile Virus (WNV)** is a virus spread by mosquitoes that primarily affects birds, humans and horses. While horses are susceptible to WNV, many horses infected with WNV will not develop any illness and recover. Of those that do become ill, approximately 30 percent die or must be destroyed. In 2003, there were 4,426 confirmed cases of equine WNV reported in 42 states.



#### Clinical signs in horses vary considerably but include:

- Ataxia (lack of coordination), circling, stumbling, falling
- Weakness or partial paralysis of limbs
- Muscle twitching, especially around the nose and lips
- Head drooping, lethargy, unresponsiveness
- Hypersensitivity to touch or sound
- Drooping lips, smacking, chewing, grinding teeth
- Falling asleep inappropriately (when eating, etc.)
- Sometimes a transient fever 10 days prior to clinical signs
- Recumbency (inability to rise)
- In severe cases, high fever, seizures, coma, and death

Most horses continue to eat and drink normally, even when recumbent. Urination and defecation are also usually normal.

**Consult your veterinarian if your horse exhibits any of these signs.**

The first confirmed California acquired WNV infection in horses was reported in October of 2003 in Southern California. Since then, many WNV positive birds have been identified in the entire southern region. In addition, California has many mosquito species that are very efficient transmitters of WNV. This means that it is quite likely that WNV will spread rapidly throughout California in 2004, and many horses and humans may be exposed to the disease. Therefore, adequate preparation in horses is crucial, and includes both vaccination and mosquito control.

#### Vaccination

The approved vaccine currently on the market is a “killed product”, and will now be offered as a “combination-product” (EEE, WEE, VEE, and tetanus). Initially two shots 3-4 weeks apart are recommended, followed by WNV boosters as determined necessary by your veterinary practitioner. A new “recombinant DNA vector virus vaccine” that requires 2 shots initially followed by annual boosters has recently been released. The manufacturer indicates quicker and longer lasting immunity and protection. Because it is important to distinguish between vaccinated and infected horses, it is important that accurate vaccination records are kept. Updated information and the best overall recommendations for a vaccination program are available from your veterinary practitioner.





# West Nile Virus Fact Sheet



## Mosquito Control

- Minimize breeding sites by draining any unnecessary standing water and cleaning water containers like birdbaths and plant saucers at least weekly
- Schedule pasture irrigation to minimize standing water
- Keep swimming pools optimally chlorinated and drain water from covers
- Stock water tanks with fish that consume mosquito larvae (local mosquito control may provide assistance) or use mosquito “dunk” available at hardware stores
- Stable horses during active mosquito feeding times (dusk/dawn)
- Use approved mosquito repellants containing DEET



## SUMMARY OF WHAT HORSEOWNERS NEED TO KNOW ABOUT WNV

- West Nile Virus is not a contagious disease. It is spread by mosquitoes that have fed on infected birds.
- A mosquito cannot bite an infected horse and spread the virus to another horse or person.
- Horses are not known to spread WNV to people. Horses are considered to be “dead-end” hosts for WNV because it appears that they do not develop a sufficient viremia to transmit the virus from contact. Clinical signs are usually not apparent until 7-10 days post infection and viremia. *Regardless, it is very important that veterinarians and other animal health workers take standard recommended precautions for all contagious equine viral encephalitic agents such as rabies and other viral encephalitis agents when dealing with horses suffering from undiagnosed neurological diseases. (ALWAYS THINK RABIES!)*
- Treatment consists of supportive measures, and there is no specific cure.
- West Nile Virus is not analogous to Foot and Mouth Disease (FMD) and Exotic Newcastle Disease (END). Both FMD and END are very contagious and spread with ease and rapidity.
- There will be no quarantines nor regulatory movement restrictions placed on WNV positive horses.
- Control of WNV in horses involves working with one’s veterinary practitioner to establish both effective mosquito control and vaccination programs.

**If you find a dead bird:** You can help by calling **877-WNV-BIRD**. Note the bird’s location, type and condition. The bird should show no signs of decomposition or maggot infestation.

### On-line resources:

CDFA: [www.cdfa.ca.gov](http://www.cdfa.ca.gov) HS: [www.westnile.ca.gov](http://www.westnile.ca.gov)  
CDC: [www.cdc.gov/ncidod/dvbid/westnile/qa/wnv\\_horses.htm](http://www.cdc.gov/ncidod/dvbid/westnile/qa/wnv_horses.htm)  
USDA: <http://www.aphis.usda.gov/lpa/issues/wnv/wnv.html>  
UCD Center for Equine Health: [www.vetmed.ucdavis.edu/ceh/](http://www.vetmed.ucdavis.edu/ceh/)



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### CDFA Animal Health Branch Offices

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